Published on *University of Colorado* (https://www.cu.edu)

Introduction to FPGA Design for Embedded Systems [1]

About This Specialization

Programmable Logic has become more and more common as a core technology used to build electronic systems. By integrating soft-core or hardcore processors, these devices have become complete systems on a chip, steadily displacing general purpose processors and ASICs. In particular, high performance systems are now almost always implemented with FPGAs.

This course will give you the foundation for FPGA design in Embedded Systems along with practical design skills. You will learn what an FPGA is and how this technology was developed, how to select the best FPGA architecture for a given application, how to use state of the art software tools for FPGA development, and solve critical digital design problems using FPGAs. You use FPGA development tools to complete several example designs, including a custom processor. If you are thinking of a career in Electronics Design or an engineer looking at a career change, this is a great course to enhance your career opportunities.

Hardware Requirements:

You must have access to computer resources to run the development tools, a PC running either Windows 7, 8, or 10 or a recent Linux OS which must be RHEL 6.5 or CentOS Linux 6.5 or later. Either Linux OS could be run as a virtual machine under Windows 8 or 10. The tools do not run on Apple Mac computers. Whatever the OS, the computer must have at least 8 GB of RAM. Most new laptops will have this, or it may be possible to upgrade the memory.

Language

English

How to Pass
Pass all graded assignments to complete the course

User Ratings
4.5

Level
Intermediate

Commitment?
See course syllabus for details.

Hardware Requirement
PC running newer Windows or Linux OS, minimum 8 GB RAM, ability to install Quartus Prime software. See course syllabus for details.

Who is this class for:
This course is for anyone with a solid background in digital electronics and logic design, including engineering students; design engineers with either an electrical engineering, mechanical engineering, or computer science background; test engineers; systems engineers; and engineering managers supervising people doing FPGA design work. Later courses in the specialization also require college-level C programming skills.

For More Information or to Enroll [2]

[2]

Created by:

University of Colorado Boulder

Groups audience:
Colorado Learning and Teaching with Technology
Right Sidebar:
MOOC Introduction to FPGA Design for Embedded Systems

Source URL:https://www.cu.edu/coltt/introduction-fpga-design-embedded-systems

Links
[1] https://www.cu.edu/coltt/introduction-fpga-design-embedded-systems
[2] https://www.coursera.org/learn/intro-fpga-design-embedded-systems